

[0022] Fig. 2 is a side sectioned view of the pump of Fig. 1 taken along line 2 - 2.

[0023] Fig. 3, Fig. 3A, Fig. 3B, Fig. 3C, Fig. 3D, Fig. 3E(1), Fig. 3E(2), Fig. 3F, Fig. 3G, Fig. 3H(1), Fig. 3H(2), Fig. 3I(1), Fig. 3I(2), Fig. 3I(3), and Fig. 3J are schematic views of differing embodiments of example piezoelectric actuator drive circuits.

5 [0024] Fig. 4A - Fig. 4D are diagrammatic views of signals occurring in an example piezoelectric actuator drive circuit.

[0025] Fig. 5A is a detailed schematic view of an example, non-limiting piezoelectric actuator drive circuit.

10 [0026] Fig. 5B is a detailed schematic view of an example, non-limiting piezoelectric actuator drive circuit showing inclusion of a PWM lookup table.

[0027] Fig. 5C is a detailed schematic view of another example, non-limiting piezoelectric actuator drive circuit.

[0028] Fig. 5D is a detailed schematic view of an example variation of the piezoelectric actuator drive circuit of Fig. 5C.

7-9-01 15 [0029] ~~Fig. 6 and~~ Fig. 6A - Fig. 6G are flowcharts showing basic steps performed upon execution of various routines by a pulse generator in accordance with an example, non-limiting embodiment.

20 [0030] Fig. 7A - Fig. 7D are diagrammatic views of example signals for the purpose of illustrating a change of pulse width modulation and a corresponding change of amplitude of a drive signal for a piezoelectric actuator.

[0031] Fig. 8A - Fig. 8D are diagrammatic views of example signals for the purpose of illustrating a change of frequency or period of a drive signal for a piezoelectric actuator.

[0032] Fig. 9A is a flowchart showing basic example steps included in a capacitance check routine.